

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/019405

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ G05B19/418

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ G05B19/418, G06F17/60, B23Q41/08

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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|---------------------------|-----------|----------------------------|-----------|
| Jitsuyo Shinan Koho | 1922-1996 | Toroku Jitsuyo Shinan Koho | 1994-2005 |
| Kokai Jitsuyo Shinan Koho | 1971-2005 | Jitsuyo Shinan Toroku Koho | 1996-2005 |

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------------------|
| X A | JP 2002-373018 A (NTN Corp.), 26 December, 2002 (26.12.02), Claims & US 2002-193972 A | 1-4, 6, 8, 12-46 5, 7, 9-11 |
| X A | JP 2002-229635 A (Nippon Steel Corp.), 16 August, 2002 (16.08.02), Claims (Family: none) | 1-4, 6, 8, 12-46 5, 7, 9-11 |
| A | JP 2002-298066 A (Toyota Motor Corp.), 11 October, 2002 (11.10.02), Par No. [0025] (Family: none) | 5, 7, 9-12, 36, 43-44 |

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

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Date of the actual completion of the international search
07 February, 2005 (07.02.05)Date of mailing of the international search report
01 March, 2005 (01.03.05)Name and mailing address of the ISA/
Japanese Patent Office

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|---|
| A | JP 10-161708 A (NEC Corp.), 19 June, 1998 (19.06.98), Par No. [0016] & GB 9725466 A & GB 2319860 A & US 5993041 A & KR 275639 B | 4, 8, 28 |
| A | JP 5-225205 A (Mitsubishi Electric Corp.), 03 September, 1993 (03.09.93), Fig. 28 & US 5657453 A | 13, 16-17, 24-27, 32, 37-38, 40, 42, 45-46 |
| A | JP 2002-288277 A (Mitsubishi Heavy Industries, Ltd.), 04 October, 2002 (04.10.02), Par No. [0006] (Family: none) | 14-15 |